UMass Worcester Prevention Research Center
Annual Report
Year 2: 2020 - 2021

FOSTERING PARTNERSHIPS
Leading the way in health promotion research
Our Vision:
Optimal health of communities, families and individuals.

Our Mission:
To promote health and prevent disease and disability through: real-world community engaged research, evidence-based practice, and education.

We accomplish our Vision and Mission by being:
1. A leader in community health research at UMass Medical School,
2. An integral part of Greater Worcester’s collaborative public health system,
3. A research partner that addresses real-world challenges across Massachusetts,
4. A national model for research that connects academia, public health, community and health care systems.

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UMass Worcester PRC: Part of a National PRC Network

The UMass Worcester Prevention Research Center (PRC) is part of a national network of 26 PRCs, funded by the US Centers for Disease Control and Prevention. Each PRC is located in an academic research center and uses a community partnered approach to research ways to prevent or manage chronic illness. Each PRC conducts one main research study in partnership with interested persons and groups in the community. The UMass Worcester PRC is located at UMass Chan Medical School, in the Division of Preventive and Behavioral Medicine. Our main research project called BP Control is focused on hypertension, and is being implemented in partnership with the Edward M. Kennedy Community Health Center and Family Health Center of Worcester. We also are part of the PRC Vaccine Confidence Network, with a focus on promoting confidence and uptake of the COVID-19 vaccines among youth and families.

Some PRCs compete for and are awarded Special Interest Projects (SIPs). Each SIP focuses on a specific issue identified as a critical need. We are implementing three SIPs:

- The Physical Activity Policy, Research and Evaluation Network (PAPREN) in partnership with the University of Illinois at Chicago, led by Stephenie C. Lemon, PhD.
- A Model for Community Health Worker Integration into Epilepsy Clinical Care Settings Informed by Clinical Provider and Patient Readiness, led by Felicia Chu, MD, UMass Chan Medical School, Department of Neurology.
- Perinatal Psychiatry Access Programs: Evaluating Patient-, Provider-, and Program-level Outcomes Across the US., led by Nancy Byatt, DO, MS, MBA, FACLP, UMass Chan Medical School, Department of Psychiatry.

Photo: Courtesy of the CDC: https://www.cdc.gov/prc/center-descriptions/index.htm
UMass Worcester PRC Community Advisory Board

Our Community Advisory Board (CAB) provides guidance and community-level input that grounds our work in the local environment and context. We are grateful for the CAB’s consistent input that we use to inform our projects, generate potential solutions to challenges, and guide our PRC’s Translation and Research agenda.

The CAB provides: 1) guidance for our projects; 2) community perspectives on emerging public health trends, priority populations and research ideas; 3) feedback on community-engaged research training programs; 4) assistance for dissemination of products and findings; 5) input on identifying and establishing specific collaborators on emerging project ideas; and 6) input for evaluations for the PRC program office.

Our group met formally twice in the past year to discuss current research and evaluation projects, including guidance for new initiatives related to the COVID-19 pandemic, strategies to promote the COVID-19 vaccines among children and families with the new PRC Vaccine Confidence Network, and the Applied Research Project BP Control.

A hallmark of the UMass Worcester PRC is the strong collaboration with individual CAB members for creating and implementing various projects. Below is a list of members of the 2019-2024 CAB.

**Eric Batista, MBA**  
Assistant City Manager  
City of Worcester

**Louis Brady, MBA**  
President/CEO  
Family Healthy Center of Worcester

**Casey Burns, MA**  
Director, Coalition for a Healthy Greater Worcester

**Joanne Calista, MSW**  
Director, Center for Health Impact

**Suzanne Cashman, ScD**  
Professor  
Family Medicine and Community Health UMCMS  
Worcester

**Stephen J. Kerrigan**  
President & CEO  
Edward M. Kennedy Community Health Center

**Judi Kirk, MSPE**  
Director of Community Impact  
Boys & Girls Club of Worcester

**Mónica Escobar Lowell**  
Vice President, Community Relations  
UMass Memorial Health

**Paul Matthews**  
Executive Director  
The Worcester Regional Research Bureau

**Jean G. McMurray**  
Executive Director  
Worcester County Food Bank

**Nikki Nixon, MS**  
Chief of Epidemiology  
Worcester Division of Public Health
Partnerships with Community Advisory Board Members

UMass Worcester PRC faculty and staff partner with CAB members for many individual projects and coalitions.

Research Partners: Specific CAB members represent partnering agencies that are involved with our work. For example, the Edward M. Kennedy Community Health Center and Family Health Center of Worcester are partners for BP Control, the PRC’s applied research project.

Additional Advisory Boards for our research and initiatives: The Coalition for a Healthy Greater Worcester and YouthConnect have been instrumental in developing and launching our initiative to promote COVID-19 vaccines with youth and families.

Contracting partners: The Worcester Division of Public Health provides contracts for us to partner with them on projects such as:
- Evaluation of Worcester REACH (CDC-funded Racial and Ethnic Approaches to Community Health) project
- Surveillance of new COVID case and vaccine counts
- Greater Worcester Regional Youth Health Survey

Public Health Coalitions in Worcester:

Many CAB members lead or participate in community coalitions. For example, the Coalition for a Healthy Greater Worcester, the Worcester Division of Public Health, the Worcester County Food Bank and UMass Memorial Health lead or collaborate on coalitions related to public health, food security and physical activity:
- Greater Worcester Community Health Improvement Plan (CHIP)
- Worcester Together (coalition of approximately 100 + agencies that are collectively responding to the pandemic.)
- Worcester Together Logistics Committee (a leadership subgroup of Worcester Together)
- Worcester Food Policy Council
- Worcester Mayor’s Task Force on Food Security
- Worcester Transportation Advisory Group
## UMass Worcester PRC Faculty and Staff

**UMass Chan Medical School**

### Directors
Stephenie C. Lemon, PhD  
Co-Director, UMass Worcester PRC  
Professor and Chief, Division of Preventive and Behavioral Medicine

Milagros C. Rosal, MS, PhD  
Co-Director, UMass Worcester PRC  
Principal Investigator, UMass Worcester PRC Applied Research Project BP Control  
Professor, Division of Preventive and Behavioral Medicine

### Faculty
- **Karen Clements, MPH, ScD**  
  Faculty, UMass Worcester PRC  
  Applied Research Project BP Control  
  Assistant Professor, Center for Health Policy and Research and Population and Quantitative Health Sciences

- **Judy Ockene, PhD, MEd, MA**  
  Faculty, UMass Worcester PRC  
  Professor, Division of Preventive and Behavioral Medicine

- **Lori Pbert, PhD**  
  Faculty, UMass Worcester PRC  
  Professor and Associate Chief, Division of Preventive and Behavioral Medicine

- **Sharina Person, PhD**  
  Faculty, UMass Worcester PRC  
  Applied Research Project BP Control  
  Professor and Vice-Chair, Population and Quantitative Health Sciences

### Affiliated Faculty
- **Rajani Sadasivam, PhD**  
  Affiliated Faculty, UMass Worcester PRC  
  Associate Professor, Population and Quantitative Health Sciences

- **Michelle Trivedi, MD**  
  Affiliated Faculty, UMass Worcester PRC  
  Assistant Professor, Pediatrics

### Staff
- **Amy Borg, MPH, MEd**  
  Deputy Director, UMass Worcester PRC  
  Project Director  
  UMass Worcester PRC Applied Research Project BP Control and Worcester Vaccine Confidence Network, Division of Preventive and Behavioral Medicine

- **Christine Frisard, MS, Statistician**  
  UMass Worcester PRC  
  Division of Preventive and Behavioral Medicine

- **Karin Valentine Goins, MPH**  
  Physical Activity Lead  
  UMass Worcester PRC  
  Research Project Director, PAPREN (Physical Activity Policy Research and Evaluation Network)  
  Division of Preventive and Behavioral Medicine

- **Princilla Minkah, BA**  
  Research Coordinator, Worcester Vaccine Confidence Network, Division of Preventive and Behavioral Medicine

- **Karen Ronayne**  
  Research Coordinator, UMass Worcester PRC  
  Division of Preventive and Behavioral Medicine
Controlling Blood Pressure with BP Control

UMass Worcester PRC’s Applied Research Project

Teamwork is important in creating systems at a health center for all clinicians and staff to follow. Teamwork is a hallmark of our work to create a systems-based quality improvement approach to help patients with uncontrolled high blood pressure (BP) who struggle to take their medications as prescribed.

Hypertension control is vitally important. Almost 50% of adults in the United States have high blood pressure, and about half of these adults have blood pressure that is uncontrolled. Uncontrolled hypertension is a risk factor for stroke or cardiovascular disease, and can result in significant health and financial burdens.

The UMass Worcester PRC’s applied research project, BP Control, is implementing an evidence-based approach to help health centers identify patients with uncontrolled hypertension who are not taking their medications as prescribed, and coach them to improve their medication adherence.

To implement BP Control, a team of people from the Edward M. Kennedy Community Health Center, Family Health Center of Worcester, UMass Worcester PRC and the IT company eMedApps have worked together to integrate BP Control into the workflow.

During this past year, the team has completed alerts and new templates in the electronic medical record, and trained staff. The program is underway!

UMass Worcester PRC Study Staff

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<td>Milagros C. Rosal, PhD</td>
<td>Principal Investigator</td>
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<td>Stephenie C. Lemon, PhD</td>
<td>Investigator</td>
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<td>Sharina Person, PhD</td>
<td>Lead statistician</td>
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<td>Amy Borg, MPH, MEd</td>
<td>Research Project Director</td>
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<td>Karen Ronayne</td>
<td>Research Coordinator</td>
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<td>Karen Clements, MPH, ScD</td>
<td>Cost Analysist</td>
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<td>Christine Frisard, MS</td>
<td>Statistician</td>
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Edward M. Kennedy Community Health Center Staff

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<td>Lenore Azaroff, MD</td>
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<td>Jose Ramirez, MD</td>
<td>Operations Champion</td>
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<td>Leopoldo Negron Cruz</td>
<td>CHW Supervisor</td>
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<tr>
<td>Sarah Bertrand</td>
<td>BP Control CHW</td>
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<tr>
<td>Evelyn Ortiz, RN</td>
<td>Clinical Supervisor</td>
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<td>Donna Latham</td>
<td>Information Technology</td>
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Family Health Center of Worcester

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<tr>
<td>Rebecca Blumhofer, MD</td>
<td>Medical Champion</td>
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<td>Thuha Le</td>
<td>Operations Champion/CHW Supervisor</td>
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<td>Nelly Plasencia</td>
<td>BP Control CHW</td>
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<td>Amanda Ryder</td>
<td>Information Technology</td>
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The Physical Activity Policy Research and Evaluation Network Hits Its Stride

The COVID-19 pandemic helped raise public interest in more walkable, bike-able environments. The mental and physical health benefits of being active in nature are becoming clearer. The need to consider equity in all public policy decisions is urgent.

The UMass Worcester PRC, together with the PRC at University of Illinois Chicago, serve as Coordinating Center for the Physical Activity Policy Research and Evaluation Network (PAPREN). PAPREN is a collaborative network of researchers, planners, engineers, policy makers, green space managers, advocates, health professionals and others interested in transforming the best research and policies into meaningful practice. Now in its third year of a five-year cooperative agreement with the US Centers for Disease Control and Prevention, PAPREN boasts regular high-quality network events, six topical Work Groups that offer space for co-learning and small projects, and a vibrant communications system that engages the membership. Thanks to this system, Network membership has more than tripled under current leadership.

Recent highlights include:

• **Grand Rounds** featuring vacant lot greening and violence reduction; climate, equity and health; a distinguished federal panel on relevant federal agency initiatives and implications for physical activity policy research; publication of the Smart Growth America Dangerous by Design 2021 report on traffic safety in the US; applying social media research methods to the study of physical activity policy; and a trans-national research project on urban form and health in Latin America.

• **Network meetings** featuring brief presentations on CDC’s unique PLACES dataset of estimates for chronic disease risk factors and health outcomes; the American Fitness Index ranking of the fittest US cities; and the newest Community Guide review on park, trail, and greenway interventions to increase physical activity.

• **30% membership growth** over the past year.

• **Work Group products** released including 7 manuscripts, 2 practitioner resources (infographic, research brief), and 5 conference presentations.

• **PAPREN Post** provides monthly updates about Work Group meetings, webinars and conferences

Want more information? Drop us a line at papren@umassmed.edu, check out our website, www.papren.org, and join today!

**UMass Worcester PRC Study Staff**
Stephenie C. Lemon, PhD
Director

Karin Valentine Goins
Program Director
The COVID-19 pandemic has been a time of turmoil and confusion around the globe. The effectiveness of the COVID-19 vaccines to help protect against severe disease has been a bright beacon of hope. In Worcester, another bright spot has been the way the community has rallied to promote, support and make sure that every Worcester resident has access to the vaccine.

As a proud member of the CDC's PRC Vaccine Confidence Network with the other 26 PRCs throughout the country, we are partnering with the City of Worcester's Office of Health and Human Services and the Worcester Division of Public Health Vaccine Equity Initiative to make sure that everyone has access to the vaccine and accurate information. In Worcester, this initiative focuses on Latinx, African American and African communities, which have experienced the greatest burden of COVID-19 and have the lowest vaccination rates. Our work focuses on promoting the vaccine with youth and families among these populations.

**Launching Worcester COVID-19 Vaccine Ambassadors**

Research suggests that people are influenced to change their health behavior by hearing the stories and motivations of people who are influential to them. We are building upon this research to create a public health media campaign with a network of youth, families, and health care providers serving as Vaccine Ambassadors to share their personal stories for being vaccinated.

**Youth Vaccine Ambassadors and #PostVaxLife Media Campaign**

In collaboration with the City of Worcester's Office of Health and Human Services we launched a public health media campaign with nine Worcester Youth Vaccine Ambassadors. Together, these youth created the “#PostVaxLife” hashtag and logo, and use them to share vaccine information on social media as a way to build vaccine confidence in the city of Worcester. This hashtag was meaningful to the youth, highlighting their desire to do the things that they enjoy again.

The #PostVaxLife media campaign created a video, posters and fliers featuring the Youth Vaccine Ambassadors, and shared them widely. Each piece shared the stories, either with images and words, of why the youth got vaccinated. The Youth Vaccine Ambassadors promoted Vaccine Equity Clinics focused on youth and families, and talked with friends and acquaintances about the vaccine.
Greater Worcester Youth COVID-19 Vaccine Video and Social Media Contest

As part of the Vaccine Ambassador Initiative we invited Worcester youth-serving agencies and their participating youth to create and submit videos and social media posts in a region-wide contest!

Using a youth empowerment model, we designed a training guide for the youth-serving agencies. Research Coordinator Princilla Minkah worked with staff and youth to create linguistically- and culturally- appropriate social media messages. In preparation for creating their own videos and social media posts, the youth first explored their own questions about the vaccines, and looked up evidence-based answers using reliable sources such as CDC and Massachusetts Department of Public Health (MDPH) websites. Each participating youth agency was also invited to engage in community outreach, invite families and youth to specific vaccination clinics, and host a clinic at their site. The training guide provided a step-by-step approach to working with youth to develop these videos and social media posts. The public and invited partners judged the entries. After the contest, the videos and social media posts were shared widely on social media and winners were announced through the UMass Worcester PRC’s Facebook, Twitter, and Instagram platforms.

We worked with many youth-serving agencies, such as the YMCA of Central MA, Girls Inc. of Worcester, Worcester Youth Center, the Regional Environmental Council, and the Boys & Girls Club of Worcester. Check out these videos and memes on our YouTube channel: UMassMED Worcester Prevention Research Center!

UMass Worcester PRC Staff

Stephenie C. Lemon, PhD
Director

Milagros C. Rosal, PhD
Investigator

Amy Borg, MPH, MEd
Project Director

Princilla Minkah, BA
Research Coordinator

Karen Ronayne
Research Coordinator

Grace Ryan, PhD
Fellow

Melissa Goulding, MS
Graduate Student

YouthGrow, a program of the Regional Environmental Council, Inc was the winner of the Greater Worcester Youth COVID-19 Video Contest, High School Video Category!
Using Data to Guide Our Local Public Health Response During the Pandemic

What groups of people have high rates of COVID?
What populations have low vaccination rates? Where do they live? How old are they?

Important questions are driving Worcester’s data-driven approach to decide how to best allocate resources and services for community members during the pandemic. The answers to these questions guide services in Worcester, from anticipating which food pantries might see an increased demand for food, to where to locate local Vaccine Equity clinics.

Nikki Nixon, MS, the Worcester Division of Public Health (WDPH) epidemiologist and member of our Community Advisory Board, and Christine Frisard, MS, a our PRC’s statistician, are the people behind the scenes tracking the COVID-19 case and vaccination counts. Together, they have partnered throughout the pandemic to track the COVID-19 cases in the City and surrounding towns. Once vaccines came on the scene, they expanded this daily count to include the number of COVID-19 vaccines administered. They have tracked this information seven days a week for two years!

Ms. Frisard and Ms. Nixon work closely to provide the number of new COVID cases daily to city/town managers so they can make informed decisions and recommendations to residents. They create heat maps of COVID-19 cases to visualize the locations of the hardest-hit neighborhoods to help guide a response of additional resources. Throughout the pandemic, public health nurses and contracted contact tracers have been given a list of new cases with addresses and educational institution affiliations so they can perform their contact tracing duties as well as make sure that first responders are aware of households with positive cases. Weekly, the number of vaccinated residents helped monitor the City’s vaccination efforts and predict the need for additional vaccine clinics.

There are additional examples of how our PRC has been working alongside WDPH to help monitor the COVID pandemic in the City of Worcester and surrounding towns. When the pandemic began, we were asked to assist the Emergency Management Department with an epidemiologic review of online tools to help the City predict the need for hospital beds, ICU beds, and ventilators in its catchment area. Our team helped define the inputs that would help the tool make the best predictions, and collected publicly available data to include in the model. We also made recommendations about tools to track PPE and calculate the rate at which hospitals were using that PPE, so they knew how long their supplies would last and could restock accordingly. We will continue to work with our partners at Worcester DPH to help support their efforts in responding to the needs of our community as efficiently as possible.

UMass Worcester PRC Staff

Stephenie C. Lemon, PhD
Director

Christine Frisard, MS
Statistician
Sharing Realities Facing Massachusetts Communities During the Pandemic

Serving as the Central Massachusetts Technical Assistance Provider for the MDPH COVID-19 Community Impact Survey

This pandemic has affected us all, but different subgroups of the population have felt the impact differently. In Fall 2020, MDPH worked with community groups and local champions to recruit and administer the MDPH COVID-19 Community Impact Survey (CCIS). This work resulted in participation by over 33,000 residents, including many underrepresented populations. The survey was administered electronically in 7 different languages. After initial analysis, MDPH reached out to the UMass Worcester PRC for assistance in gathering qualitative data, performing more customized analyses and disseminating results. This established our role as the Central Massachusetts Technical Assistance Provider for the CCIS.

Focus groups
On looking at preliminary CCIS results, MDPH grew concerned about the pandemic’s effect on specific groups of people and wanted to learn more about their experiences. We conducted a series of focus groups with residents of Massachusetts from these groups who have been particularly impacted to better understand their experiences during the pandemic. The purpose of these groups was to inform public health initiatives and create effective public health COVID-19 communication materials. During the summer of 2021, the UMass Worcester PRC asked trusted community messengers to invite people to participate in the focus groups, and to facilitate these conversations over ZOOM. Groups were held with African, African American, Latinx, Native American, Transgender and Non-Binary, LGBQ+, Vietnamese and Parent populations. We have analyzed the information and shared the results with MDPH. The findings from these groups helped to inform analysis of CCIS data and gave important context to CCIS findings.

Population Spotlights
PRC Director Stephenie C. Lemon, PhD led a group of graduate students and staff in analyzing results, focusing specifically on the populations who were selected for the focus groups to supplement the MDPH’s Population Spotlights. Population Spotlights highlight the pandemic’s impact across many domains including: basic needs, access to healthcare, employment, mental health, substance use and safety. Spotlights created by the PRC team are unique in that they dive deeply into these social determinants of health and the differential impacts of the pandemic on these determinants felt by different subgroups of these populations. Spotlights are meant to share key findings from the CCIS in context provided by community members in our focus groups, and are standalone documents which present CCIS findings for use by community partners and stakeholders to support their work with these groups.

Central Massachusetts Technical Assistance Provider
As the are the Central Massachusetts Technical Assistance Provider for the MDPH’s CCIS data, we seek to share the data widely so that it is used. We have been actively reaching out to leaders of municipalities, non-profit organizations, public health entities, and coalitions to offer tailored analyses. Invitations to utilize these data have been shared by email, social media, and our website. We are grateful for the opportunity to participate in this important effort.

To access a tailored analysis for your group, please email us at umwprc@umassmed.edu

UMass Worcester PRC Staff and Students

Stephenie C. Lemon, PhD
Director

Christine Frisard, MS
Statistician

Amy Borg, MPH, MEd
Project Director

Melissa Goulding, MS
Graduate Student Analyst
Welcome, Princilla Minkah!

The UMass Worcester PRC welcomes Princilla Minkah to our team! Princilla is the Research Coordinator for our Worcester Vaccine Confidence Project. She is a Class of 2021 graduate of Dartmouth College where she earned a BA in Cultural Anthropology, Global Health, and African and African American Studies, on the pre-med track. Princilla hopes to apply to medical school in the near future and hopes to pursue an MPH as well, but in the meantime, she is working with the PRC and hopes to gain more experience in the research side of public health. Previously, she’s done research involving health disparities through an undergraduate fellowship and internships. Princilla hopes to combat health disparities in underserved populations and hopes to continue to use her knowledge and resources to reduce the gaps and limitations of community and global health. She is interested in making a positive impact in the healthcare field through her dedication to medicine and higher education. Princilla seeks to learn how to use innovative ideas and research to advance the health and well-being of humans.

Ms. Minkah is focused on the Worcester Vaccine Confidence Network. As she is from Worcester and a graduate of the Worcester Public Schools and participant with Girls Inc. programs, she has shared her professional and personal expertise while coordinating the work of the Youth Vaccine Ambassadors and the Greater Worcester Youth COVID-19 Vaccine Video and Social Media Contest. We are glad that she has joined us!
Spotlight on Post-Doctoral Fellows and Students

Oluwabunmi Emidio, MD MPH will graduate with a PhD in May 2022!
Dr. Oluwabunmi Emidio came to UMass Chan Medical School to develop new public health research skills related to cancer prevention as a PRACCTIS post-doctoral fellow in the Department of Population and Quantitative Health Science at UMass Chan Medical School. Under the mentorship of Stephenie Lemon, PhD, this interest transitioned into an opportunity to focus on the implementation and evaluation of evidence-based interventions in practice to improve health outcomes and equity.

During her time as a trainee, she co-authored two peer-reviewed papers and had oral and poster presentations of her research at the 21st New England Science Symposium and other conferences.

To learn more about Dr. Emidio, check out these selected Publications:


Welcome, Grace Ryan, PhD. MPH!
Dr. Grace Ryan is excited to join University of Massachusetts Chan Medical School as a postdoctoral fellow focusing on cancer prevention and implementation science. Prior to joining the Medical School she completed her MPH at New York University and most recently graduated from the University of Iowa with her PhD in Community and Behavioral Health. At Iowa, her research explored implementation of evidence-based interventions for HPV vaccination and cancer screening. She focuses on clinical settings and has worked with partners in rural health clinics, Critical Access Hospitals, Federally Qualified Health Centers, and academic medical centers. She is looking forward to expanding on her research in the fields of adolescent health, cancer prevention, and implementation science during her fellowship.

Currently, she is working with the UMass Worcester PRC on their efforts to encourage youth adolescent COVID-19 vaccination through community-engaged work with local community-based organizations and pediatric clinics.
Updates from Melissa Goulding, MS

Melissa Goulding is a doctoral candidate in the Clinical and Population Health Research Program (CPHR) at the University of Massachusetts Chan Medical School. Mentored by Dr. Stephenie Lemon, her research interests include chronic disease prevention in children with a focus on health equity. She is grateful for the opportunity to learn from Dr. Lemon and to be a part of the important work conducted by The UMass Worcester PRC. So far in her time with the PRC, Melissa has conducted a secondary analysis of data from the Healthy Kids and Family Study, helped conduct formative interviews for the BP Control study, and contributed to analysis and dissemination of the COVID Community Impact Survey in partnership with the Massachusetts Department of Public Health. The research experiences she has gained from these PRC projects have greatly enriched her PhD training. Melissa’s dissertation work is a mixed methods exploration of adherence to clinical practice guidelines for blood pressure screening in pediatric populations within the UMass Memorial Healthcare System. Moving forward, Melissa hopes to build a career in academia and community-based research which focuses on chronic disease prevention and health equity in children.
Welcoming New Special Interest Projects!

We welcome new projects to the UMass Worcester Prevention Research Center family. Below is a description of two new projects that are being implemented at UMass Chan Medical School.

A Model for Community Health Worker Integration into Epilepsy Clinical Care Settings Informed by Clinical Provider and Patient Readiness

People with epilepsy can face many challenges in managing their health. Not only do they need to manage recurrent seizures, but may also face challenges with managing their medications, lifestyles, employment, transportation, and even other diseases. Each stage in life may present new challenges, such as, transitioning to different schools or places of employment, or changes in life, such as pregnancy or aging. Even if the seizures themselves are well-controlled, the disease may progress, and bring new challenges.

The CDC-funded SIP project, led by Felicia Chu, MD, Assistant Professor of Neurology at UMass Chan Medical School with Elaine Kiriakopoulos, MD at Dartmouth-Hitchcock Epilepsy Center or Geisel School of Medicine at Dartmouth is exploring how Community Health Workers (CHW) could help patients navigate to the resources they need. CHWs are typically members of a cultural or linguistic community, who understand that community and are trusted by its members. By collecting patient, caregiver and multidisciplinary epilepsy provider input, project is working to develop a transferrable model of epilepsy care that integrates CHWs into epilepsy care teams to and see if the intervention can improve patient's quality of life, increase patient confidence and knowledge, facilitate enrollment into self-management programs, and link patients with community and clinical services.

Nancy Byatt, DO, MS, MBA, FALCP

Radley Christopher Sheldrick, PhD, MA

Perinatal Psychiatry Access Programs: Evaluating Patient-, Provider-, and Program-level Outcomes Across the US

What is the best way to provide mental health care to women who are pregnant or are new mothers? A team of researchers is examining this question, led by Dr. Nancy Byatt from UMass Chan Medical School and Dr. Radley Christopher Sheldrick from Boston University School of Public Health. The project will develop an approach for assessing a model for delivering mental health care to pregnant and postpartum individuals being implemented across the United States, Perinatal Psychiatry Access Programs. In collaboration with key partners, consensus will be developed on what outcome measures are practical and matter most.

Findings will be shared with Perinatal Psychiatry Access Programs and key partners to improve Access Programs’ programming and evaluation, and inform policy and funding.
Research Brief

Differences in Blood Pressure Levels Among Children by Sociodemographic Status

Overview
Overweight and obesity are known risk factors for high blood pressure among children. In 2017, the American Academy of Pediatrics (AAP) updated clinical practice guidelines for blood pressure screening in children, to reflect the importance of body weight. As a result of this update, new prevalence estimates showing the percentage of US children with elevated blood pressure were needed. Research suggested that there are disparities in the prevalence of blood pressure related to demographic factors such as age, and race/ethnicity. However, these studies used outdated blood pressure guidelines, did not investigate relationships with socioeconomic factors such as education, and income, or the role of body weight in observed disparities.

Main Questions
The researchers wanted to know:
1. What is the prevalence of different high blood pressure levels among US children from 2011 to 2018?
2. Does the blood pressure prevalence vary across sociodemographic subgroups?
3. What role does weight play in sociodemographic disparities in blood pressure?

Study
This cross-sectional study used nationally representative data of 5,971 children between the ages of 8-17 years of age from the 2011 to 2018 versions of the National Health and Nutrition Examination Survey (NHANES) weighted to represent 36,612,323 children. AAP clinical practice guideline blood pressure categories were used. Prevalence estimates of elevated blood pressure was computed. Log binomial regression was used to estimate crude and weight status adjusted prevalence differences for each sociodemographic subgroup. Sociodemographic factors included, age, sex, race/ethnicity, family education level, and family income.

The Bottom Line
Overweight and obesity are major risk factors for elevated blood pressure. More children in certain sociodemographic subgroups of people experience elevated blood pressure. After adjustment for body weight, observed disparities in prevalence of elevated blood pressure in older, male, and non-Latino Black children remained. This indicates that factors beyond differences in body weight may contribute to disparities in blood pressure.

Source

Contact
Stephanie C. Lemon, PhD | Division of Preventive and Behavioral Medicine | University of Massachusetts Chan Medical School. E-mail: Stephenie.Lemon@umassmed.edu

Acknowledgement
This research was supported by the National Institute of Health (TL1TR001454) and the Centers for Disease Control and Prevention (CDC) (U48DP005031-01). This publication is also a product of a Health Promotion and Disease Prevention Research Center from the CDC. The content is solely the responsibility of the authors.

Spotlight on Results
1. Among US children aged 8 to 17 years a prevalence of 7.2% for elevated blood pressure and 3.8% for hypertensive blood pressure was found from 2011-2018.
2. Prevalence estimates of elevated blood pressure were higher in males, older children (16-17 years of age), non-Latino Black children, and children of lower socioeconomic status. After adjustment for body weight, there were elevated blood pressure prevalence differences in age, sex, race/ethnicity, and parent/guardian education.
3. Elevated blood pressure was more prevalent in children categorized as overweight or as having obesity than children of healthy weight.

Call for Action
Further investigation of sociodemographic disparities in elevated blood pressure is needed to guide public health efforts. A better understanding of how sociodemographic factors interact with blood pressure levels in children is needed so action can be taken to lessen disparities.

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Research Brief

Emotional Eating Facilitates the Relationship Between Food Insecurity and Obesity in Latina Women

Overview
A disproportionate number of Latino households do not have access to enough nutritious food, and so face food insecurity. Research has found that food insecurity is a risk factor for obesity, especially among Latina women. Research has also found that food insecurity can cause people to feel more stressed, and that emotional eating can be a coping mechanism. Little is known, though, about the role that emotional eating might have in the relationship between food insecurity and obesity.

Main Questions
- Is there an association between food insecurity and obesity among this group of Latina women?
- What is the role of emotional eating in this group of women who face both food insecurity and obesity?

Study
This study is a secondary analysis of the Latino Health and Well-Being Study, which took place in the largely Latino city of Lawrence, Massachusetts. From 2011-2013, Latino men and women were recruited from the Greater Lawrence Family Health Center. The current study only focused on the 297 recruited Latina women. Food insecurity was measured with 6-item US Department of Agriculture Household Food Security Scale. Emotional eating was measured by 6-items from the Three-Factor Eating Questionnaire (2nd version). Body mass index was measured by height and weight. Analysis consisted of multivariable logistic and linear regressions, mediation testing and proportion calculation.

The Bottom Line
Emotional eating may play a role in increasing the risk for obesity among Latina women who face food insecurity. If so, it would be important to screen for emotional eating and develop interventions to help.

Source

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Acknowledgement
This research was supported by the National Institute of Mental Health (R01MH085653). Dr Lemon and Dr Rosal received funding from the National Institute of Minority Health and Health Disparities (5 P60 MD006912) and the Centers for Disease Control and Prevention (1 U48 DP005031). Dr López-Cepero received funding from the National Institutes of Health (ST32DK007703-24).

Spotlight on Results
- 36.7% of women were food insecure
- Food insecurity was associated with both obesity (odds ratio [OR] = 1.79; 95% CI, 1.08-2.97; P = 0.02) and emotional eating (β = 0.22; 95% CI, 0.001-0.44; P = 0.05)
- Emotional eating was associated with obesity (OR = 1.82; 95% CI, 1.37-2.42; P < 0.01).
- When emotional eating was included in the main effects model, food insecurity was no longer associated with obesity (OR = 1.64; 95% CI, 0.97-2.76; P = 0.06).
- Emotional eating explained 21% of the association between food insecurity and obesity.

Call for Action
- Research needed to confirm findings, develop & test interventions for emotional eating among Latina women facing food insecurity.
- Health care providers can screen for emotional eating in Latinas facing food insecurity.
Funded Projects

09/30/2020 – 09/30/2021

Public Health Practice

Experiences with COVID-19 among Population Sub-Groups in Massachusetts
Prevention
UMass Worcester PRC is conducting a series of focus groups to gather and present in-depth information about Massachusetts residents’ experiences during the COVID-19 pandemic, with particular emphasis on the social determinants of health. These include factors such as mental and behavioral health, access to care, financial impact, employment, housing, safety and social support. The populations of focus were selected in collaboration with the MDPH by using the results of the COVID Community Impact Survey (CCIS) to identify populations with high disparities and/or challenges.

**UMass Worcester PRC Investigators**: Stephenie C. Lemon, PhD

**Partners**: Trusted messengers for specific populations

**Funder**: Massachusetts Department of Public Health (MDPH) (contract)

**Dates**: 2021-2022

**Research Foci**: COVID-19 Prevention and Mitigation, Social Determinants of Health

Central Massachusetts Technical Assistance Provider for the MDPH Covid-19 Community Impact Survey
UMass Worcester PRC is conducting analyses and disseminating data from the COVID Community Impact Survey (CCIS) to describe disparities and/or challenges that were identified for each population of focus in this survey.

**UMass Worcester PRC Investigators**: Stephenie C. Lemon, PhD

**Funder**: Massachusetts Department of Public Health (contract)

**Dates**: 2021-2022

**Research Foci**: COVID-19 Prevention and Mitigation, Social Determinants of Health

COVID-19 Case and Vaccination Counting in Central Massachusetts
UMass Worcester PRC is working with the Worcester Division of Public Health to make daily counts of COVID-19 cases and vaccinations.

**UMass Worcester PRC Investigator**: Stephenie C. Lemon, PhD

**Funder**: City of Worcester Division of Public Health (Contract)

**Dates**: 2020-2022

**Research Foci**: COVID-19 Prevention and Mitigation

Greater Worcester COVID-19 Survey
In collaboration with the Worcester Division of Public Health and the Central Massachusetts Public Health Alliance, this community wide survey assesses the experiences of Greater Worcester residents with the SARS CoV-2 pandemic, including physical, emotional and social impacts.

**UMass Worcester PRC Investigator**: Stephenie C. Lemon, PhD

**Partners**: Worcester Division of Public Health and Massachusetts Public Health Alliance

**Funder**: Massachusetts COVID-19 Relief Fund (PI: MPI) Sharina Person, PhD

**Dates**: 2020-2022

**Research Focus**: COVID-19 Prevention and Mitigation
Evaluation of the Worcester Division of Public Health REACH (Racial and Ethnic Approaches to Community Health) Project
This sub-contract to the Worcester Division of Public Health's REACH project will allow in-depth evaluation of the REACH program. Evaluation focuses on the implementation of evidence-based policy, systems and environmental strategies to promote health among Latino residents.

UMass Worcester PRC Investigators: Stephenie C. Lemon, PhD, Milagros C. Rosal, PhD
Funder: City of Worcester Division of Public Health, US Centers for Disease Control and Prevention (CDC) (PI: Bolen) (Contract)
Dates: 2019-2022
Research Foci: Diet, Physical Activity, Leading Chronic Disease, Social Determinants of Health

Greater Worcester Regional Youth Health Survey
The survey is administered to middle and high school students in the Greater Worcester Area. It asks about health risk behaviors such as bullying, smoking, alcohol and drug use, food security and others.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: Worcester Division of Public Health (PI: Lemon) (Contract)
Dates: 2016-2023
Research Focus: Diet, Physical Activity, Tobacco

Policy, Systems, Environment

Physical Activity Policy and Evaluation Research Network (PAPREN) (SIP)
This Special Interest Project (SIP) is a PRC network with three overarching aims: 1) establishing and building capacity among a network of researchers and practitioners who conduct physical activity policy research, 2) providing technical assistance in built environment-related policy activities among recipients of CDC SPAN, REACH and HOP grants, and 3) conducting an applied evaluation to understand the long-term influence of master plans on physical activity and associated outcomes and to identify model policies.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: US Centers for Disease Control and Prevention (PIs: Lemon, Chriqui)
Dates: 2019-2024
Research Focus: Physical Activity

Public Health Assessment for Transportation Projects
This project assembled tools and metrics including ITHIM for use in evaluating the impact of transportation investments on health and equity and incorporating relevant outcomes into decision making at MassDOT and at the community level. Project goals were to identify available frameworks, tools, data and performance measures; utilize existing datasets to develop additional performance measures; develop a framework that could be incorporated into planning and decision-making processes for transportation projects; and provide recommendations for further investigation. UMMS had responsibility for the physical activity elements.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: Massachusetts Department of Transportation
Dates: 2018-2020
Research Focus: Physical Activity
Intervention and Implementation

BP Control: Economic Analysis of the Implementation of a Community Health Worker – Delivered Intervention to Enhance Antihypertensive Medication Adherence in Accountable Care Organizations. As the Applied Research Project of the UMass Worcester PRC, BP Control is studying costs, return-on-investment, and blood pressure among sub-groups of people associated with implementing an effective intervention for promoting adherence to anti-hypertensive medications among patients with uncontrolled hypertension. The intervention will be implemented as standard of care for all patients with uncontrolled hypertension.

UMass Worcester PRC Investigators: Milagros C. Rosal, PhD, Stephenie C. Lemon, PhD
Partners: Edward M. Kennedy Community Health Center, Family Health Center of Worcester, Inc.
Funder: UMass Worcester PRC’s Core research project, funded by the US Centers for Disease Control and Prevention (CDC) (PI: Rosal)
Dates: 2019-2024
Research Focus: Leading chronic disease

Prevention Research Center Worcester Vaccine Confidence Network
The UMass Worcester Prevention Research Center is promoting confidence and uptake of COVID-19 vaccines among youth and families in Worcester, Massachusetts. There are three components to this approach 1) Vaccine Ambassador Campaign 2) Navigating to vaccines, and 3) Collaborating with pediatricians and health care providers to provide vaccines to their patients and have effective conversations with parents.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: US Centers for Disease Control and Prevention (CDC)
Dates: 2021-2022
Research Focus: COVID-19 Prevention and Mitigation

Coordinating community-clinical linkages with community health workers to improve health and social outcomes for adults with epilepsy (SIP)
This PRC SIP project is relevant to public health because it has the potential to provide a sustainable and transferable model of epilepsy care that could be utilized at: epilepsy centers across the country, community neurology practices, and primary care practices in rural and underserved areas. Such unique models may offer epilepsy patients better disease management, improved quality of life, and a greater ability to reduce upstream health determinants, thereby improving overall health and well-being. Thus, the research is relevant to the CDC’s role to promote healthy and safe behaviors, communities, and environments.

UMass Worcester PRC Investigators: Stephenie C. Lemon, PhD (PI of record),
Funder: US Centers for Disease Control and Prevention (CDC) (PI: Chu)
Dates: 2021-2022
Research Focus: Leading chronic disease

Perinatal Psychiatry Access Programs: Evaluating Patient-, Provider-, and Program-level Outcomes Across the US (SIP)
This PRC SIP will develop an approach for assessing a model for delivering mental healthcare to pregnant and postpartum individuals being implemented across the United States, Perinatal Psychiatry Access Programs. Findings will be shared with Perinatal Psychiatry Access Programs and key partners to 1) improve Access Programs’ programming and evaluation, and 2) to inform policy and funding.

UMass Worcester PRC Investigators: Stephenie C. Lemon, PhD (PI of record)
Funder: US Centers for Disease Control and Prevention (CDC) (PI: Byatt)
Dates: 2021-2024
Research Focus: Leading chronic disease
RADx Clinical Studies Core
The Clinical Studies Core of RADx supports the clinical testing of SARS CoV-2 point of care testing devices in diverse communities across the United States in partnership with academic, health care and government agencies.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD, Milagros C. Rosal, PhD
Funder: National Institutes of Health, National Heart, Lung and Blood Institute (NHLBI) (PI: McManus)
Dates: 2020-2022
Research Foci: COVID-19 Prevention and Mitigation

PR-OUTLOOK: PR Young Adults Stress, Contextual, Behavioral & Cardiometabolic Risk
This study will fill knowledge gaps regarding the prevalence of cardiovascular disease (CVD) behavioral and cardiometabolic risk factors and overall cardiovascular health (CVH) among young adults in Puerto Rico and ascertain their psychosocial (individual and neighborhood-level) and sociodemographic determinants. We will establish an island-wide cohort of 3,000 young adults (18-29 years old) using a multi-stage sampling of probabilistic plus community approaches; conduct comprehensive assessments (survey, anthropometric, physiological), and establish a biorepository (blood, hair, saliva, urine) for future longitudinal studies of CVD risk, DVH, and mechanism.

UMass Worcester PRC Investigator: Milagros C. Rosal, PhD
Funder: National Institutes of Health (PIs: Rosal, Perez)
Dates: 2019-2024
Research Focus: Leading chronic disease, Social Determinants of Health

Translating Research into Practice: A Regional Collaboration to Reduce Disparities in Breast Cancer Care
Translating Research into Practice (TRIP) draws upon the principles of community-engaged implementation science to facilitate deployment and utilization of: (a) regional patient registries; (b) systematic screening for social barriers to care with a referral plan; and (c) patient navigation services into one integrated model of care to improve the quality and effectiveness of care delivery for African American women with breast cancer.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: National Institutes of Health, National Cancer Institute (NCI) (PIs: Battaglia, Freund, Haas, Lemon)
Dates: 2017-2022
Research Focus: Leading chronic disease, Social Determinants of Health

Bridging the Evidence-to-practice Gap: Evaluating Practice Facilitation as a Strategy to Accelerate Translation of a Systems-level Adherence Intervention into Safety Net Practices
This study will test whether a refined practice facilitation strategy improves fidelity to the implementation of ALMA, an evidence-based intervention targeting adherence to antihypertensive medication among Latino patients with uncontrolled hypertension; and whether the practice facilitation strategy results in improved blood pressure control.

UMass Worcester PRC Investigator: Milagros C. Rosal, PhD
Funder: National Institutes of Health, New York University School of Medicine (PI: Schoenthaler)
Dates: 2019-2024
Research Focus: Leading Chronic Disease
STRIDE: Strengthening Translational Research in Diverse Enrollment
This collaborative study between UMass Medical School, Vanderbilt and the University of Alabama at Birmingham is developing innovative approaches to enhancing informed consent procedures with a goal of improving research literacy among under-served populations. This project is developing a multi-level informed consent platform that integrates e-consent with patient storytelling and simulations-based research assistant training. The intervention will be tested in the context of six ongoing clinical trials in a multiple time series design randomized trial.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: National Institutes of Health, National Center for the Advancement of Translational Science (PIs: Lemon, Allison, Saag, Harris)
Dates: 2016-2022
Research Focus: Social Determinants of Health

FITLINE: Pediatric Practice-based Obesity Intervention to Support Families
The goal of this randomized clinical trial is to test a program consisting of a telephone coaching and family workbook of informational materials to see if it reduces obesity among children. The trial is enrolling 512 children ages 8 to 12 with overweight and obesity and their family from 16 pediatric practices.

UMass Worcester PRC Investigator: Lori Pbert, PhD
Funder: National Institutes of Health, National Heart, Lung, and Blood Institute (NHLBI)
Dates: 2016-2022
Research Foci: Diet, Physical Activity

Preventing Childhood Obesity Through Youth Empowerment: A Cluster RCT of the H2GO! Program
This study is a partnership with Boys and Girls Clubs in Massachusetts and involves testing the effectiveness of a narrative-based youth empowerment intervention for reducing sugar sweetened beverage consumption and obesity.

UMass Worcester PRC Investigators: Milagros C. Rosal, PhD, Stephenie C. Lemon, PhD
Partner: Boys and Girls Clubs in MA
Funder: National Institutes of Health, National Institute of Diabetes & Digestive & Kidney Diseases (NIDDK), Boston University-Prime (PI: M. Wang)
Dates: 2020-2025
Research Focus: Diet

Vaper to Vaper: A Multimodal Mobile Peer Driven Intervention to Support Adolescents in Quitting Vaping
Vaper-to-Vaper (V2V) is a group of mobile tools, such as texting, which are designed for adolescents to help their peers manage their tobacco cravings and quit vaping. The tools building from prior tobacco intervention work.

UMass Worcester PRC Investigator: Lori Pbert, PhD
Funder: National Institutes of Health, National Institute on Drug Abuse (NIDA)
Dates: 2021-2023
Research Focus: Tobacco

Continuation of the Nicotine Dependence in Teens (NDIT) Study to Age 30
The study followed the use of tobacco products, quit attempts, and genetic and environmental factors among study participants. It extended the ability to follow-participants until they are 30 years old.

UMass Worcester PRC Investigator: Lori Pbert, PhD
Partners: University of Montreal
Funder: Canadian Cancer Society Research Institute (PI: O’Loughlin)
Dates: 2015-2020
Research Focus: Tobacco
Training Grants

Prevention and Control of Cancer: Training for Change in Individuals and Systems
This project continues funding for the PRACCTIS (Prevention and Control of Cancer: Training for Change in Individuals and Systems), a pre- and post-doctoral training program located at the UMass Medical School in partnership with its affiliates: UMass Boston, Baystate Health, Worcester Polytechnic Institute and the Center for Healthcare Outcomes and Implementation Research at the Veteran’s Health Administration. The project trains the next generation of scientists to conduct pragmatic research that seeks to promote evidence-based practice along the cancer continuum.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: National Institutes of Health, National Cancer Institute (NCI) (PIs: Lemon, Ockene)
Dates: 2019-2024
Research Focus: Leading Chronic Disease

K12 Cardiopulmonary Implementation Science Scholars Program
This interdisciplinary K12 training program for junior faculty that promotes the development of independent implementation researchers committed to addressing cardiopulmonary disease prevention, treatment and management. The program is led by the UMass Medical School in collaboration with Baystate Health and the Center for Healthcare Organization and Implementation Research of the Veteran’s Health Administration.

UMass Worcester PRC Investigator: Stephenie C. Lemon, PhD
Funder: National Institutes of Health (PIs: Lemon, Lindenaure, Wiener)
Dates: 2017-2022
Research Focus: Leading Chronic Disease
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